

Pennsylvania—Tioga, 8°, 64°; Pittsburg, 19°, 77°; Philadelphia, 19°, 69°; Westchester, 15°, 67°; Tarentum, 14°, 74°; Egypt, 13°, 64°. *Delaware*—Dover, 24°, 66°. *Maryland*—Woodstock, 14°, 70°; Emmittsburg, 15°, 76°. *District of Columbia*—Washington, 21°, 75°. *Virginia*—Broad Oak, 20°, 82°; Norfolk, 29°, 79°. *West Virginia*—Helvetia, 22°, 72°; Morgantown, 23°, 74°. *North Carolina*—Highlands, 18°, 67°; Weldon, 27°, 84°. *South Carolina*—Aiken, 29°, 80°; Charleston, 35°, 78°. *Georgia*—Savannah, 38°, 85°; Atlanta, 31°, 79°. *Florida*—Jacksonville, 44°, 86°; Key West, 66°, 83°. *Alabama*—Mobile, 39°, 85°; Montgomery, 33°, 85°. *Mississippi*—Vicksburg, 32°, 84°; Brookhaven, 32°, 80°. *Louisiana*—New Orleans, 45°, 84°; Baton Rouge Bks., 36°, 89°. *Texas*—Denison, 26°, 92°; Concho, 27°, 97°; Galveston, 45°, 85°; Clarksville, 36°, 94°; Austin, 38°, 89°; Melissa, 28°, 94°. *Ohio*—Jacksonburg, 14°, 78°; Westerville, 3°, 71°; Cincinnati, 18°, 74°. *Kentucky*—Louisville, 22°, 79°; Bowling Green, 20°, 82°. *Tennessee*—Memphis, 26°, 85°; Nashville, 22°, 81°. *Arkansas*—Mt. Ida, 21°, 88°. *Michigan*—Escanaba, —10°, 57°; Alpena, —8°, 66°; Detroit, 14°, 67°. *Indiana*—Spiceland, 10°, 72°; New Harmony, 16°, 78°. *Illinois*—Peoria, 5°, 74°; Chicago, 16°, 71°; Anna, 21°, 86°. *Missouri*—Oregon, 4°, 89°; St. Louis, 16°, 82°. *Kansas*—Morse, 2°, 84°; Holton, 8°, 90°; Topeka, 4°, 92°. *Wisconsin*—Embarrass, —6°, 65°; Madison, 5°, 68°; La Crosse, 1°, 67°. *Iowa*—Vail, —3°, 80°; Dubuque, 7°, 71°; Des Moines, 1°, 79°. *Nebraska*—Genoa, —1°, 77°; Emerson, 5°, 96°; Omaha, 31°, 82°. *Indian Territory*—Fort Sill, 21°, 95°; Fort Gibson, 24°, 88°. *Minnesota*—Duluth, —14°, 62°; Breckenridge, —24°, 69°. *Dakota*—Pembina, —26°, 52°; Yankton, —3°, 87°; Deadwood, —5°, 71°. *Colorado*—Colorado Springs, 12°, 77°; Denver, 17°, 81°; Pike's Peak, —4°, 43°. *New Mexico*—Santa Fe, 25°, 82°; Fort Union, 10°, 77°. *Wyoming Territory*—Cheyenne, 8°, 77°; Ft. Fetterman, 6°, 79°. *Montana*—Virginia City, 14°, 68°. *Utah*—Salt Lake City, 28°, 77°; Ft. Douglass, 25°, 80°; Kanab, 43°, 86°. *Nevada*—Winnemucca, 16°, 82°; Pioche, 25°, 77°. *Arizona*—Florence, 37°, 95°; Tucson, 39°, 90°; Phoenix, 43°, 94°. *Idaho*—Boise City, 27°, 75°. *California*—San Francisco, 47°, 77°; Los Angeles, 42°, 99°; Sacramento, 38°, 75°; San Diego, 44°, 99°; Red Bluff, 38°, 82°; Visalia, 38°, 91°; Princeton, 40°, 85°; Salinas, 32°, 80°. *Oregon*—Portland, 33°, 73°; Eola, 32°, 76°.

Ranges of Temperature.—The monthly ranges will appear from an examination of the minima and maxima just given. Greatest daily ranges vary in New England from 20° at Wood's Holl to 36° at Burlington; Middle States, 23° at Cape May to 36° at New York, Washington and Lynchburg; South Atlantic States, 20° at Cape Lookout to 38° at Augusta; Gulf States, 12° at Key West to 24° at Galveston, 26° at Mobile, 32° at St. Marks and Vicksburg and 39° at Corsicana; western Texas, 28° at Laredo to 45° at Mason and Fort Concho; Ohio valley and Tennessee, 26° at Cairo to 43° at Knoxville and 40° at Pittsburg; Lower Lake region, 26° at Buffalo and Erie to 33° at Sandusky; Upper Lake region, 28° at Port Huron to 41° at Escanaba; the Northwest, 28° at Davenport to 43° at Breckenridge and Pembina and 49° at Yankton; Eastern Slope, 41° at Fort Sill to 47° at North Platte; Rocky Mountain stations, 27° at Virginia City to 47° at Santa Fé and 51° at Fort Craig; Western Plateau, 30° at Boise City to 48° at Winnemucca; California, 21° at San Francisco to 43° at San Diego; Oregon, 26° at Portland.

Frost—has occurred quite frequently over the northern sections of the country; in the interior of the Southern States and Texas from the 1st to 5th, 15th to 20th, 24th, 25th, 31st; along the immediate Gulf coast on the 4th, 12th, 18th, 19th, 22nd; Campo, Cal., 1st, 2nd, 4th, 5th, 11th, 12th; Umatilla, Or., 1st, 3rd, 13th, 14th, 21st; Portland, Or., 1st, 5th, 13th; Victoria, B. C., 5th, 7th, 21st. Not any reports have been received of destructive frosts during the month.

Frost out of Ground.—Riley, Ill., 25th; Woodstock, Md., 22nd; Fallston, Md., 20th.

Ground frozen.—Murphy, N. C., 31st; Waltham, Mass., 31st, two feet deep.

Ice—formed in the Gulf and South Atlantic States as follows: Denison, Tex., 17th; Okalooska, La., 18th, 19th; Charlotte, N. C., 18th; Fayette, Miss., 18th; Augusta, Ga., 2nd.

PRECIPITATION.

The general distribution of the rainfall, which includes melted snow, for the month is illustrated as accurately as possible upon chart No. III. In the lower left-hand corner of same will be found a table giving average precipitation of March by districts. Slight excesses have occurred in the St. Lawrence valley and New England; and large excesses from eastern Washington Ty. to the northern half of California, due to the frequency of low pressure areas. It has been about normal in Minnesota and the Ohio valley. In the remaining sections there has been a deficiency; especially in the South Atlantic and Gulf States, over which a general storm has not passed during the month. The rainfall of 0.83 in. at Tucson, Arizona, was received after the preparation of the chart.

Special Heavy Rains.—4th and 5th, San Francisco, 4.80 inches; Red Bluff, 3.07 in.; Sacramento, 2.38 in. 9th and 10th, Eola, Or., 2.20 in. 12th and 13th, New Ulm, Tex., 2.94 in. 13th, Ft. Barrancas, Fla., 1.75 in. 19th, Ft. Barrancas, Fla., 3.65 in. 21st, Mobile, 4.20 in., (in 9 hours.) 22nd, White Plains, N. Y., 2.20 in. 23rd and 24th, Eola, Or., 1.99 in. 23rd to 25th, Ft. Stevens, Or., 8.05 inches. 26th and 27th, White Plains, N. Y., 2.30 in. 26th, Melissa, Tex., 3.50 in., (in 3 hours.) 27th to 29th, Ft. Stevens, Or., 4.40 inches.

Largest Monthly Rain-falls.—Fort Stevens, Or., 22.60 inches; Olympia, Wash. Ty., 14.44; Cape Hatteras, 12.77; Portland, Or., 11.70; Fort Canby, Wash. Ty., 10.92; Eola, Or., 10.66; San Francisco, Cal., and Fayetteville, N. C., 8.75; Roseburg, Or., 8.60; Mt. Washington, 7.51; Cape Henry, 7.47; St. Meinrad, Ind., 7.23; Ft. Barrancas, Fla., 7.14; Newport, 6.18.

Smallest Monthly Rain-falls.—Kit Carson and Ft. Lyon, Col., Ft. Union and Ft. Craig, N. M., Ft. Wallace, Kan., Hamilton, Nev., St. George, Utah, none; Ft. Hays and Waterville, Kan., trace; Ft. Davis, Tex.,

0.04 inches; Ft. Leavenworth, Kan., 0.06 in.; St. Marys, Wy. Ty., and Trinidad, Col., 0.07 in.; San Diego, Cal., 0.10 in.; Punta Rassa, Fla., 0.14 in.; Boerne and Indianola, Tex., 0.18 in.

Hail.—Salt Lake City, 27th; Santa Fe, 3rd; Cheyenne, 19th; Pt. San Jose, Cal., 6th; Ft. Garland, Col., 21st, 31st; Ft. Columbus, N. Y., 8th, 9th; Fort Concho, Tex. 27th; Ft. Fred Steele, Wy. Ty., 3rd, 19th, 20th.; Ft. Fetterman, Wy. Ty., 3rd; Green Springs, Ala., 26th; Olivet, Dak., 23rd; Gainesville, Ga., 22nd; Mt. Sterling, Ill., 1st, 2nd, 20th, 21st; Anna, Ill., 16th; Spiceland, Ind., 10th, 29th; Cresco, Ia., 9th, 12th; Independence, Ia., 28th; Gardiner, Me., 31st; Sandy Springs, Md., 17th; Camp McDermitt, Nev., 26th; San Francisco, 6th, 7th; Portland, Or., 2nd; Corsicana, 26th, very severe, five miles NW. of station, stones fell to the depth of three inches; Somerset, Mass., 9th; New Bedford, Mass., 17th, 22nd; Rowe, Mass., 14th; Fall River, Mass., 9th, 17th, 22nd; Detroit, 5th; Nirvana, Mich., 12th; Brookhaven, Miss., 16th, 21st, 22nd; Fayette, Miss., 22nd; Genoa, Neb., 27th; Trenton and Princeton, N. J., 8th; Vineland, N. J., 26th; Freehold, N. J., 6th, 8th; Melissa, Tex., 26th, very severe, stones drifted in some places to the depth of two feet; Ardenia, N. Y., 22nd; Flushing, N. Y., 9th; Nile, N. Y., 8th; Murphy, N. C., 30th; Webster, N. C., 22nd; Westerville, Ohio, 24th, 29th; Bellefontaine, Ohio, 26th; Jacksonburg, Ohio, 10th, 20th; North Lewisburg, Ohio, 24th; Catawissa, Pa., 22nd; Battle Creek, Mich., 10th; New Westminster, B. C., 2nd, 7th, 8th, 9th, 10th, 22nd; Fillmore, Utah, 20th; Roseburg, Or., 20th.

Rainy Days.—The number of days on which rain or snow has fallen varies as follows: New England, 11 to 21; Middle States, 6 to 20; South Atlantic States, 3 to 16; Gulf States, 3 to 8; Lower Lakes, 16 to 25; Upper Lakes, 11 to 17; Ohio valley and Tennessee, 10 to 19; Upper Mississippi valley, 12 to 18; Lower Missouri valley, 4 to 14; Eastern Slope, 0 in Kansas to 9 in western Dakota; Rocky Mountains, 0 in southern New Mexico to 13 in Montana; Western Plateau, 2 in southern Nevada to 17 in Idaho; Pacific coast, 4 in southern California to 23 in northwestern Oregon.

Cloudy Days.—For New England the number varies from 8 to 19; Middle States, 5 to 11; South Atlantic States, 2 to 12; Gulf States, 1 to 7; Lower Lakes, 12 to 23; Upper Lakes, 9 to 13; Ohio valley and Tennessee, 2 to 14; Upper Mississippi valley, 3 to 10; Lower Missouri valley, 4 to 11; Eastern Slope, 2 to 8; Rocky Mountains, 4 to 11; Western Plateau, 5 to 19; Pacific coast, 8 to 18.

Snow fell in the different districts as follows: *New England*, 1st, 2nd, 4th to 9th, 11th to 23rd, 25th to 31st; *Middle States*, 2nd, 3rd, 6th, 7th, 13th, 17th, 18th, 19th, 21st, 22nd, 26th; *Ohio valley and Tennessee*, 1st, 2nd, 14th to 20th, 25th, 30th, 31st; *Lower Lakes*, 2nd to 6th, 13th to 27th, 30th, 31st; *Upper Lakes*, 1st, 2nd, 4th, 5th, 6th, 12th to 24th, 26th, 27th, 31st; *Upper Mississippi valley*, 1st, 2nd, 3rd, 7th, 9th, 11th to 16th, 18th, 20th, 21st, 22nd, 23rd, 31st; *Eastern Slope*, 1st, 2nd, 3rd, 8th, 9th, 11th, 12th, 13th, 15th, 16th, 18th, 20th to 23rd, 31st; *Rocky Mountains*, 1st to 4th, 6th to 9th, 12th, 13th, 15th to 22nd, 27th, 31st; *Western Plateau*, 3rd, 6th to 9th, 19th, 20th, 21st; *Oregon*, 2nd, 4th, 6th, 7th, 8th; *California*, 2nd, 3rd, 6th to 8th; *British Columbia*, 4th, 9th, 10th, 22nd.

Snow from a Cloudless Sky.—Madison, Wis., 14th, one-fourth inch.

Depth of Snow on Ground at end of Month.—It varied as follows: *New England*—from 0 at Burlington and Eastport to 35 inches, and on Mt. Washington, 40 in. *Middle States*—northern portion, trace to 15 in.; at North Volney, N. Y., 0 to 4 feet deep in "openings" and 12 to 18 in. in the woods. *Lower Lake region*—0 to 3 in. *Upper Lake region*—0 to 5 in. *North Carolina*—observers at Murphy and Webster report snow on mountains. *California*—the Sacramento observer reports snow in the Sierra Nevada Mountains. Summit of *Pike's Peak*, 3 in.

Droughts.—Visalia, Cal., 10th, grain crops suffering for want of rain. Campo, Cal., 31st, vegetation drying up; cattle and sheep suffering badly. Kanab, Utah, 13th, 14th, very dry, vegetation suffering; 16th, farmers watering wheat; 17th to 31st, no rain, drought severe. Holton, Kan., 31st, ground very dry, grain crops suffering considerably. Independence, Kan., 31st, wheat, oats and grass very much in need of rain. San Antonio, Tex., 12th. Mason, Tex., 26th, wheat crop suffering, foliage and grasses very backward. Corsicana, Tex., 18th, crops suffering in various localities west of station; 26th, drought very severe; in some sections, ten miles west of station, it is reported that no rain has fallen for ten weeks. Gatesville, Tex., 12th, first rain this year. Austin, Tex., 31st, everything suffering from a protracted and severe drought, only 9.32 inches of rain since July 1st, 1878.

Floods.—Sacramento, Cal., 14th, 15th, river 23 feet and 4 inches above low-water mark, levee broken one-half mile above city, flooding the "tule" lands; also reported that far down the river crops in some instances submerged. Red Bluff, Cal., 4th, river rising very rapidly; 5th, 3 p. m., 17 feet and 10 inches above low-water mark, (danger-line 20 feet;) 6th, 3 p. m., 22 feet and 9 inches; 7th, river falling. Columbus, Ohio, 22nd, heavy rain-storm, Scioto river overflowed, washouts on all the railroads.

RELATIVE HUMIDITY.

The average percentage of relative humidity for the month ranges as follows: New England, 68 to 76; Middle States, 52 to 77; South Atlantic States, 52 to 84; East Gulf States, 66 to 74; West Gulf States, 60 to 84; Lower Lakes, 71 to 79; Upper Lakes, 65 to 75; Ohio valley and Tennessee, 55 to 67; Upper Mississippi valley, 62 to 69; Lower Missouri valley, 55 to 60; Red River of the North valley, 75 to 89; Eastern Slope, 52 to 82; Western Plateau, 28 to 60; California, 57 to 79. *High stations* report the following not corrected for altitude: Mt. Washington, 88; Pike's Peak, 39; Santa Fe, 35; Cheyenne, 44; Denver, 45; Virginia City, 55; Colorado Springs, 61.